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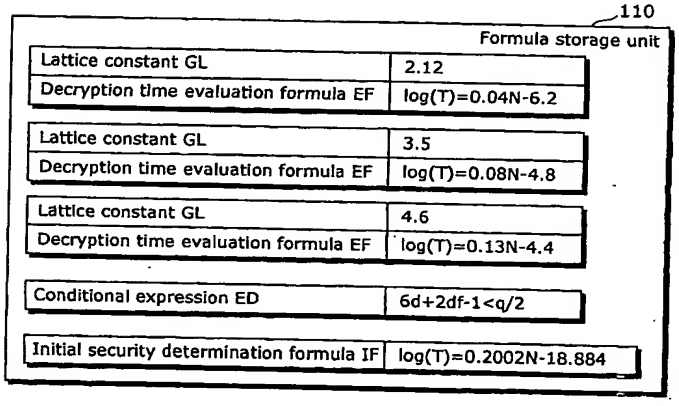
(54) Title: PARAMETER GENERATION APPARATUS, ENCRYPTION SYSTEM, DECRYPTION SYSTEM, ENCRYPTION APPARATUS, DECRYPTION APPARATUS, ENCRYPTION METHOD, DECRYPTION METHOD, AND PROGRAM THEREOF



(57) Abstract: A parameter generation apparatus for generating parameters causing no decryption error for an NTRU cryptosystem so that an encrypted communication can be carried out between an encryption apparatus and a decryption apparatus in a secure and reliable manner, is comprised of: a provisional parameter generation unit operable to generate a set of provisional parameters that do not cause any decryption errors, based on error condition information that is provided in advance, said error condition information indicating a condition for causing no decryption error; and an output parameter generation unit operable to generate an output parameter that does not cause any decryption errors, using said set of provisional parameters, based on a lattice constant that is calculated from said set of provisional parameters.

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